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TECHNICAL SPECIFICATIONS,
PROJECT DETAILS
FOR THE
FLEECER MOUNTAIN WILDLIFE MANAGEMENT AREA – McGUINNESS FENCE

FWP # 7135307

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SECTION 01010

SUMMARY OF WORK

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Owner responsibilities.
- B. Contractor responsibilities and use of site
- C. Scope of Work

1.2 OWNER'S RESPONSIBILITIES:

- A. Owner's Responsibilities:
 - 1. Designating work areas and access.
 - 2. Providing contract and technical information
 - 3. Staking fence locations.

1.3 CONTRACTOR'S RESPONSIBILITIES:

- A. Contractor's Responsibilities:
 - 1. Materials testing and certification.
 - 2. Quality control of work.
 - 3. Contact utilities to have them locate any lines that may be in conflict. "Montana 811".
 - 4. Protection of wildlife management area from degradation caused by vehicle traffic related to fence construction.
- B. Contractor Use Of Site :
 - 1. Contractor to strictly limit all construction activities to designated routes.

1.4 SCOPE OF WORK

A. Project Objective:

The objective of this project is to replace fencing on the Fleecer Mountain Wildlife Management Area.

B. Scope of Work:

Work includes the following but is not limited to the general description contained herein: Refer to plans for location of work.

1. Remove designated existing fence.
2. Remove deadfall from fence line as specified. Fall standing dead trees in the vicinity of the fence to a distance equal to the height of the trees.
3. Construct specified fence type as shown on the plan sheets.

C. Contracts:

1. All work shall be done under one general contract.

D. Environmental Considerations:

1. Equipment used on project shall not leak fluids. Furthermore, to mitigate and prevent the spread of noxious weed, all equipment used shall be power washed just prior to moving the equipment on site.
2. Contractor is to suspend vehicle use when conditions become wet enough that vehicles will cause rutting damage to soils, roads and vegetation.
3. Contractor to schedule and coordinate work to minimize the number of trips over designated routes.

E. Estimated Quantities And Measurement:

1. Project work will be compensated for on a per rod basis or for each item delivered.
2. Additional units of work will be compensated on total completed count of each unit.

END OF SECTION

SECTION 01019

CONTRACT CONSIDERATIONS

PART I. GENERAL

1.1 SECTION INCLUDES

- A. Application for Payment.
- B. Change Order Procedures.
- C. Supervision

1.2 RELATED SECTIONS

- A. Section 01025 - Measurement and Payment.
- B.. Section 01400 - Quality Control

1.3 APPLICATIONS FOR PAYMENT

- A. Submit one copy of each application on Department Fish, Wildlife and Parks Form 101.
- B. Content and Format: Utilize Schedule of Values or bid form for listing items in Application for Payment.
- C. Payment Period: 30 days.

1.4 CHANGE ORDER PROCEDURES

- A. The Project Manager will advise of minor changes in the Work not involving an adjustment to Contract Sum/Price or Contract Time as authorized by State of Montana, General Conditions of the Contract, Article V.
- B. The Project Manager may issue a Change Directive that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change. Contractor will prepare and submit an estimate within 5 days.
- C. The Contractor may propose changes by submitting a request for change to the Project Manager describing the proposed change and its full effect on the Work. Include a statement describing the reason for the change, and the effect on the Contract Sum/Price and Contract Time with full documentation and a statement describing the effect on Work by separate or other contractors.

- D. Unit Price Change Order: For pre-determined unit prices and quantities, the Change Order will be executed on a fixed unit price basis. For unit costs or quantities of units of work that are not pre-determined, execute Work under a Construction Change Directive. Changes in Contract Sum/Price or Contract Time will be computed as specified for Time and Material Change Order.

1.5 SUPERVISION

- A. The contractor and Department shall designate one person each as the contact for contract issues. Any changes to the contract shall need to be approved by the designated contacts. Any changes not approved by the designated Department contact shall be made at the contractor's risk.
- B. The Montana Department of Fish Wildlife and Parks contact shall be Project Manager,

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END OF SECTION

SECTION 01025

MEASUREMENT AND PAYMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Measurement and payment criteria applicable to the Work performed under a unit price payment method.
- B. Defect assessment and non-payment for rejected work.

1.2 AUTHORITY

- A. Measurement methods delineated in the individual specification sections are intended to complement the criteria of this section. In the event of conflict, the requirements of the individual specification section shall govern.
- B. Take all measurements and compute quantities. The Project Manager will verify measurements and quantities.

1.3 UNIT QUANTITIES SPECIFIED

- A. Unit price quantities and measurements indicated in the Bid Form are for bidding and contract purposes only. Quantities and measurements supplied or placed in the Work and verified by the Project Manager shall determine payment. Lump sum bid item quantities will not be measured. Payment for these lump sum bid items will be per bid form.
- B. If the actual Work requires more or fewer quantities than those quantities estimated, provide the required quantities at the unit sum/prices contracted.
- C. A renegotiated bid price will occur if the total quantity differs by 50% from the bid quantity.

1.4 MEASUREMENT OF QUANTITIES

- A. Measurement by Length: Measured by linear rod dimension using the distance along the slope and reducing to equivalent quantity of rods installed. Department inspectors will check lengths using a wheeled measuring device.
- B. Unit Measurement: Items measured as a completed item or unit of the Work.

1.5 PAYMENT

- A. Final payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities accepted by the Project Manager multiplied by the unit sum/price for Work which is incorporated in or made necessary by the Work plus agreed upon change orders.

1.6 DEFECT ASSESSMENT

- A. Replace the Work, or portions of the Work, not conforming to specified requirements.
- B. If, in the opinion of the Project Manager it is not practical to remove and replace the Work, the Project Manager will direct one of the following remedies:
 - 1. The defective Work will be repaired to the instructions of the Montana Department of Fish, Wildlife and Parks Project Manager and the unit sum/price will be adjusted to a new sum/price at the discretion of the Montana Department of Fish, Wildlife and Parks Project Manager.
- C. The individual specification sections may modify these options or may identify a specific formula or percentage sum/price reduction.
- D. The authority of the Montana Department of Fish, Wildlife and Park Project Manager to assess the defect and identify payment adjustment is final.

1.7 NON-PAYMENT FOR REJECTED PRODUCTS

- A. Payment will not be made for any of the following:
 - 1. Products wasted or disposed of in a manner that is not acceptable.
 - 2. Products determined as unacceptable before or after placement.
 - 3. Products not completely unloaded from the transporting vehicle.
 - 4. Products placed beyond the lines and levels of the required Work.
 - 5. Products remaining on hand after completion of the Work.
 - 6. Loading, hauling and disposing of rejected Products.

END SECTION

SECTION 01300

SUBMITTALS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Submittal procedures.
- B. Construction progress schedules.
- C. Proposed products list.
- D. Product data.
- E. Samples.
- F. Manufacturers' instructions.
- G. Manufacturers' certificates.

1.2 SUBMITTAL PROCEDURES

- A. Transmit each submittal to Project Manager no less than 5 days before product installation.
- B. Apply Contractor's stamp, signature or initial certifying that review and verification of Products submitted, is in accordance with the requirements of the Work and Contract Documents.
- C. Schedule submittals to expedite the Project.
- D. Identify variations from Contract Documents and Product or system limitations which may be detrimental to successful performance of the completed Work.
- E. Revise and resubmit submittals as required, identify all changes made since previous submittal.

1.3 CONSTRUCTION PROGRESS SCHEDULE

- A. Submit a written progress schedule within 15 days of the execution of the contract.

1.4 PROPOSED PRODUCTS LIST

- A. Within 15 days after date of Notice to Proceed, submit complete list of major fencing products proposed for use, with name of manufacturer/supplier, trade name, and model number of each product.
- B. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

1.5 PRODUCT DATA

- A. Submit product data in the form of manufacturer's product information or testing to verify that the product meets project specifications.

1.6 SAMPLES

- A. At the Project Manager's request submit samples of proposed materials.

1.6 MANUFACTURER'S INSTRUCTIONS

- A. When specified in individual specification Sections, submit manufacturers' printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, in quantities specified for Product Data.
- B. Identify conflicts between manufacturers' instructions and Contract Documents.

1.7 MANUFACTURER'S CERTIFICATES

- A. When specified in individual specification Sections, submit manufacturers' certificate to Project Manager or review, in quantities specified for Product Data.
- B. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
- C. Certificates may be recent or previous test results on material, but must be acceptable to Project Manager.

END OF SECTION

SECTION 01400
QUALITY CONTROL

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Quality assurance and control of installation.
- B. Inspection

1.2 QUALITY ASSURANCE and CONTROL OF INSTALLATION

- A. Monitor quality control over suppliers, manufacturers, Products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply fully with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect/Engineer before proceeding.
- D. Comply with specified standards as a minimum quality for the Work except when more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Perform work by persons qualified to produce workmanship of specified quality.
- F. Secure Products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion or disfigurement.

1.3 INSPECTION

- A. Owner
 - 1. Project Manager will perform periodic field inspections of fence installation.

END OF SECTION

SECTION 01600

MATERIAL AND EQUIPMENT

PART I GENERAL

1.1 SECTION INCLUDES

- A. Products.
- B. Transportation and handling.
- C. Storage and protection.
- D. Substitutions.

1.2 PRODUCTS

- A. Products: Means new material, components, and systems forming the Work. Does not include machinery and equipment used for preparation, fabrication, conveying and erection of the Work.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.

1.3 TRANSPORTATION AND HANDLING

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to assure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

1.4 STORAGE AND PROTECTION

- A. Store and protect products in accordance with manufacturer's instructions, with seals and labels intact and legible. Store sensitive products in weather-tight, climate controlled enclosures.
- B. For exterior storage of fabricated products, place on elevated supports.
- C. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to avoid condensation.
- D. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.

- E. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

1.5 SUBSTITUTIONS

- A. Project Manager will consider requests for Substitutions only within 15 days after date established in Notice to Proceed.
- B. Substitutions may be considered when a product becomes unavailable through no fault of the Contractor.
- C. Document each request with complete data substantiating compliance of proposed Substitution with Contract Documents.
- D. A request constitutes a representation that the Contractor:
 - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product.
 - 2. Will provide the same warranty for the Substitution as for the specified product.
 - 3. Will coordinate installation and make changes to other Work that may be required for the Work to be complete with no additional cost to Owner.
 - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
- E. Substitutions will not be considered when they are indicated or implied on shop drawing or product data submittals, without separate written request, or when acceptance will require revision to the Contract Documents.
- F. Substitution Submittal Procedure:
 - 1. Submit request for Substitution for consideration. Limit each request to one proposed Substitution.
 - 2. Submit shop drawings, product data, and certified test results attesting to the proposed product equivalence.
 - 3. The Project Manager will notify Contractor, in writing, of decision to accept or reject request.

END OF SECTION

SECTION 01700

CONTRACT CLOSEOUT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Closeout procedures.
- B. Final cleaning.
- C. Warranties

1.2 CLOSEOUT PROCEDURES

- A. Notify the Project Manager within 5 days of Work completion that Work is complete in accordance with Contract Documents and ready for Project Manager's final inspection.
- B. Provide submittals to Project Manager that are required by governing or other authorities or Owner.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due. Include Certificate of Substantial Completion, Affidavit on Behalf of the Contractor, Consent of Surety Company to Final Payment and As-built drawings and specifications.

1.3 FINAL CLEANING

- A. Execute final cleaning prior to final inspection. Remove all debris from site.
- B. The contractor shall remove staking set to mark the property line for fence construction. Permanent monuments, establishing the property boundaries, shall not be disturbed. The cost of reestablishing permanent monuments destroyed during construction will be the responsibility of the contractor.

1.4 WARRANTIES

- A. All work shall be warranted free from defect for a period of one year from final inspection date.

END OF SECTION

SECTION 02110

SITE CLEARING and FENCE REMOVAL

PART 1 DESCRIPTION

- 1.1 This work shall consist of clearing, grubbing, removing, and disposing of vegetation, debris and salvage fence material. This work shall also include the preservation from injury of vegetation and objects designated to remain.
- 1.2 "Clearing" shall consist of the removal of trees and debris. Clearing shall also include the disposal of brush, windfalls, limbs, sticks, piles of sawdust, rubbish, debris, vegetation, and other objectionable material occurring within the clearing limits or which interfere with repair of fencing.
- 1.3 "Grubbing" shall consist of the removal from the ground and the disposal of roots, stumps, together with duff, matter, roots, and debris from the grubbing limits that interfere with repair of fencing.

PART 2 EXECUTION

- 2.1 General. The area to be cleared and/or grubbed is the area within 4 feet of the existing fence line on the south side of the fence and 8 feet on the north side of the fence. All other areas shall be considered as designated to remain. The Contractor shall preserve all facilities designated to remain.
- 2.2 Construction.
 - a. No stumps or roots shall remain more than 4 inches above the ground along the fence line.
 - b. Low hanging branches and unsound or unsightly branches on trees or shrubs designated to remain shall be removed as directed. Branches of trees extending over the fence line shall be trimmed to give a clear height of 8 feet above the ground along the fence line. Fallen trees shall be removed from the fence line. Width of clearing for fence line shall be 4 feet on the south side of the fence and 8 feet on the north side of the fence.
 - c. Fall standing dead trees within a distance equal to the height of the tree away from the fence. Remove tops and limbs and scatter slash. Avoid stacking fallen logs.
- 2.3 Material refuse (brush and woody material) created from clearing and grubbing shall be dispersed on site at the direction of the FWP Project Manager.

PART 3 SALVAGE FENCE MATERIAL DISPOSAL

- 3.1 Salvage material to become property of the contractor to be disposed of in a safe and legal manner.

PART 4 MEASUREMENT AND PAYMENT

- 4.1 Measurement and payment for site clearing and grubbing associated with fence construction will be compensated for on a lump sum basis. See Fenceline Clearing on the Bid Form.
- 4.2 Fence and wire removal will be compensated for on a measured per rod basis. See Fence Removal on the Bid Form.

Payment for the various items specified above shall be full compensation for furnishing all labor, materials, tools, and equipment necessary or incidental to the construction of the complete fence including disposing of all debris, to the satisfaction of the Project Manager.

END OF SECTION

SECTION 02839

WIRE FARM FENCE

PART 1 DESCRIPTION

Work under this specification shall consist of furnishing materials, erecting and repairing fence of wire fastened to posts, repairing single panels, double panels, corners, and gates, and performing similar operations, all in conformity with specifications, plans, drawings, and other instruction.

PART 2 MATERIALS

1. Wire shall be "Red Brand" zinc-coated, steel wire meeting the requirements of ASTM A-121 or equal. Breaking strength of strand wire shall be not less than 950 pounds. Minimum weight of zinc coating shall be Class I. Wire shall consist of 2 twisted strands of 12-½-gauge wire.
2. Barbless wire shall be two smooth twisted strands of 12-½-gauge wire; zinc coated steel meeting requirements of ASTM A-121 or equal. Breaking strength of a strand of wire shall be not less than 950 pounds, Minimum weight of zinc coating shall be Class I
3. Brace wire shall be barbless, single strand of 9-gauge wire meeting requirements of ASTM A-641. Wire shall be zinc-coated steel with a minimum coating of zinc meeting Class I requirements. It will be used for constructing braces and panels, tying to anchors, etc.
4. Staples. Wire staples of the barbed U-shaped type shall be used to fasten the wire fencing to the wooden posts. They shall be not less than 9 gauge, 1 3/4 inches long, bright finished or galvanized.
5. Nails. Shall be 40 d ring shank. Unless otherwise specified.
6. Fence clips shall be not lighter than 11 gauge, galvanized. They shall be used to fasten the wire to metal posts.
7. Wire stays shall be 30" long twisted wire fence stay specifically manufactured for use as fence stays and made from #9 gauge galvanized smooth wire.
8. Steel Metal Posts shall meet the requirements of ASTM A-702 and be American manufactured. Painting shall be in accordance with good manufacturing practice. Posts shall be 5 1/2 feet long. The metal shall be good commercial quality steel with maximum carbon content of 0.82%. Posts shall be Tee or U-bar section and shall have corrugations, knobs, notches, holes, or studs so placed and constructed as to engage a substantial number of fence line wires in proper position (punched tabs for fastening

wire are not acceptable). Each line post shall have a steel anchor plate weighing not less than 0.67 pounds, tapered to facilitate driving and securely fastened by means of a weld or riveted, in such a position that its top edge will be two to three inches below ground when the post is driven to the prescribed depth. Post shall weigh 1.33 lbs. per L.F. of post.

9. Wood Line Posts. Posts and shall be made from western larch, lodge pole pine, ponderosa pine, or Douglas fir. They shall have the bark removed, be well seasoned, sound, and straight-grained. They shall be finished round. Posts shall be 5-inch minimum diameter and 7 feet in length. Posts shall be treated with a preservative solution conforming to AWP standards. Penetration shall be at least 1/2 inch. Post shall be fully treated. Posts that are to be driven shall be tapered and treated.
10. Wood Posts and Brace Rail. Posts and brace rail shall be made from western larch, lodge pole pine, ponderosa pine, or Douglas fir. They shall have the bark removed, be well seasoned, sound, and straight-grained. They shall be finished round. Posts shall be 5-inch minimum diameter and 8 feet in length. Posts shall be treated with a preservative solution conforming to AWP standards. Penetration shall be at least 1/2 inch. Post shall be fully treated. Posts that are to be driven shall be tapered and treated. Brace rail shall be a minimum 4-inch diameter and shall be 8 feet long fully treated.
11. Gates and Single Panels. Post and brace rail shall be the same as specified for line fence panels and corners. Gates shall be 14'-16' wide or as indicated and shall be located at the same locations as existing gates or as directed by the Project Manager. Gates shall have 4 strands of wire with 2 wire stays per 16' width. Stays shall be 1 1/2" –2 1/2" poles. Each gate shall have a new single panel on each side of wire gate and a mechanical over-center gate closer.
12. Dead men anchors shall be used at grade depressions. A No. 5 rebar shall be welded in the center and a loop formed in the other end to accept the tie wire. Rebar length shall be 30 inches after the loop is formed. Other anchor types may be accepted upon approval of the Project Manager. Commercial Duckbill anchors are also approved.

PART 3 CONSTRUCTION METHODS

1. Property corners and other survey monuments shall not be disturbed. In the case of a conflict notify the Project Manager.
2. Postholes and excavations for footings and anchors shall be excavated on the lines of the fence to the depths and cross-sections shown on the standard drawings. Wooden posts may be driven when so prepared and any damaged posts shall be repaired or rejected. Post shall be plumb when set.

3. All posthole filling and backfilling work shall be in six-inch layers and each layer shall be solidly tamped and compacted as it is placed.
4. Posts that are cut, notched or trimmed for any reason shall be given two coats of EPA approved preservative material approved by the Project Manager. Braces shall be securely nailed to terminal and brace posts. Brace to post joint shall be coped or notched. No square to round joint accepted.
5. Dead men or anchors will be used at grade depressions, angle points, and other places where unusual stresses will be exerted on the fence. Additional strands of wire may be used in depressions where a dead man is placed and shall be equally spaced on 8-inch intervals except for the last wire above the ground, which shall be barbless wire and situated 18 inches above the ground.
7. All posts shall be plumb and solidly set in place after backfilling or driving has been completed.
8. Stretching by a motor vehicle will not be permitted; the power must be by or through a mechanical stretcher or device designed for such use.
9. Fence line shall be straight and square between corner points.
10. Fence clips shall be bent all the way around fence wire.
11. Tension shall be applied in accordance with wire manufacturer's recommendations.
12. Fence wire shall be wrapped twice around terminal posts and fastened to itself with at least four turns. Fence wire, in general, shall be placed on the side of the post facing the road. At grade depressions and alignment angles, where stresses tending to pull posts from the ground are created, the wire fence shall be snubbed or guyed at the critical points by brace wire attached to each horizontal line of fence wire and the end of the combined strands being firmly attached to a "dead man" buried not less than two feet in the ground, or to an approved "anchor" at a point which will serve best to resist the pull of the wire fence. "Dead men" also may be fastened to posts.
13. U-shaped staples shall be driven diagonally across the wood grain so that both points do not enter between the same grain. In depressions where wire up-lift occurs, staples shall be sloped slightly upward, against the pull of the wire. On level ground and over knolls, staples shall be sloped slightly downward. Wire shall be stapled tightly at corner, end, and pull posts. In no case shall staples be driven so tight as to damage the wire.

14. A cross-fence, not the property of the Owner, shall not be fastened to the Owner's fence but shall be terminated, in a workmanlike manner, adjacent to the owners fence.
15. Upon completion, the fence shall be true to line and grade; all posts shall be vertical and firm and all wire shall be taut and the completed fence shall be completely acceptable in all respects.
16. Single panel braces shall be placed at intervals of 30 rods, or at major terrain changes. Refer questions to FWP Project Manager.
17. Weed Control: All equipment used during construction shall be thoroughly washed both inside, outside, underneath, pickup boxes, trailer's, trucks, etc. before entrance to the project area. Vehicles used to commute to and from job site shall be kept clean as not to transport weed seed to project area. This cost shall be subsidiary to the project and considered incidental thereto and no payment shall be made for it.

PART 4 METHODS OF MEASUREMENT

1. All work, materials and equipment associated with the fence construction shall be measured in the field.

PART 5 BASIS OF PAYMENT

1. Wire fence construction and wire fence removal shall be measured and compensated for on a per rod basis.
2. Items listed on the Bid Form on a per Each basis shall be counted and compensated for based on the actual count.

Payment for the various items specified above shall be full compensation for furnishing all labor, materials, tools, and equipment necessary or incidental to the repair of the complete fence and gates, including excavation, backfilling anchors, tamping, miscellaneous hardware, smoothing the irregularities of the ground at fence site, and disposing of all debris, all to the satisfaction of the Engineer.

END OF SECTION